



WELL DEVELOPMENTS

Fall - 2007

BWWC

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Senate Bill 324: Well Location Reporting

This spring, during the 60th Legislative session, Senate Bill 324 was introduced, amended, and adopted by the Legislature. This bill accomplished two things:

- 1) it requires aquifer test data required by state agencies to be forwarded to the Bureau of Mines and Geology for inclusion in their Ground Water Information Center (GWIC) database; and
- 2) it requires water well drillers and contractors to provide two methods of reporting well locations when filling out well logs. Specifically, SB 324 amends Montana Code Annotated 85-2-516(2) to include the following text: "The driller shall provide a location for the well using at least two methods as specified on the form."

What does this mean for the drilling community?

It means that those areas on the well log for optional additional location information (shaded gray) are no longer optional. For every well, drillers and contractors are required to report the well location in the Township, Range, Section (TRS) format to the nearest $\frac{1}{4}$, $\frac{1}{4}$ (40 acres), as well as reporting the well location in at least one of the following additional location descriptions:

- 1) Latitude/Longitude (via GPS)
- 2) Subdivision, Lot and Block
- 3) Physical well address

It also means that the driller or contractor is responsible for providing the location when filing the well log with the Bureau of Mines and Geology. If this information is not

included, or the well log report is otherwise incomplete, the Bureau of Mines and Geology may return the report to the well driller or contractor for correction and refile.

What does this mean for individual drillers and contractors?

This depends on your current business model, where most of your business is, and your access to technology. For example, if you are working in eastern Montana (with few subdivisions and large tracts of land) and are without access to the internet or even a computer, the only option available to you may be to report locations in TRS and GPS. In contrast, if you are working in western Montana (in active land markets and subdivisions with many small parcels) and have access to the internet, there may be additional possibilities for reporting locations.

In many cases, drillers are already utilizing GPS units, and reporting locations in both Latitude/Longitude and TRS. GPS units, when used correctly, give the most accurate location of the well site; and locations provided by GPS are preferred above all other methods by the Bureau of Mines and Geology. Fortunately, these units are now affordable for most consumers, and can be found at many retailers. A good GPS unit does not need a lot of "bells and whistles" to be effective. All you need is something that provides location coordinates, and is WAAS capable. (Note: The WAAS or Wide Area Augmentation System uses land based reference stations at precisely surveyed locations in North America to augment the GPS satellite system. This allows for even better precision in determining locations, typically within 10 to 23 feet). If you have a computer, many GPS devices can also download saved locations (waypoints) for use with commercially available topographic map packages.



Senate Bill 324 will require well drillers and contractors to provide two methods of reporting well locations.

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What other resources are available?

Aside from GPS, there are several other resources available to drillers to help determine the location of a well, including topographic maps, transparent overlays, and state and county websites.

For those individuals who are most comfortable with the “low tech” route, using hard copies of the topographic maps with gridded overlays may be the best choice (topographic mapping packages can also be used with overlays on the computer screen). In any case, make sure that the scale of the gridded overlay and the map scale are identical.

For those drillers using the internet, the Cadastral Mapping Project is another possibility. This website by the Dept. of Revenue allows individuals to find parcels by browsing individual sections, or search for a parcel in a particular county by either landowner name or subdivision. Results are displayed in map and table form and typically provide a good legal description. Like all internet applications, however, the data reported is only as good as that provided, and in some cases parcels of land are bought and re-sold faster than the ownership can be reported and entered into the database. For many counties, however, the Cadastral Mapping Project remains an effective tool. This public access website can be found at: <http://cadastral.mt.gov/>

Another useful public internet site, used in conjunction with GPS coordinates, is the Topofinder tool by the Natural Resource Information System (NRIS). This tool allows the user to enter Latitude/Longitude information and plot the location on a topographic background. As with the Cadastral site, there are limitations to using Topofinder. It does not provide maps at specific scales, nor does it allow for easy image re-sizing. For those users with faster internet

connections, you may wish to check out the Topofinder II tool. This site allows the user to zoom in a specific section, and then (using the location finder) will provide Latitude/Longitude coordinates for locations identified by the mouse pointer. Both of these programs can be found at: <http://nrismt.gov/interactive.html>

Again, this is only a partial list of tools available to drillers and contractors to help them determine location. You are highly encouraged to talk with others in the industry to see what other possibilities are out there and what system works best for your business and customers. If you would like more information on use of public systems, the Bureau of Mines and Geology and the Board of Water Well Contractors are available to help you get started or answer your questions.



New Licensees

Water Well Contractors
Richard LeBlanc, Yellow Jacket Drilling – Gilbert, AZ

Monitoring Well Constructors
Jose Pereda, Inberg Miller Engineers – Riverton, WY

Water Well Drillers
Tyler Sampson, Bridger Drilling – Belgrade, MT
Derek Toney, H&L Drilling – East Helena, MT
William Wood, Graham Drilling – Sheridan, MT

Monitoring Wells: Direct-Push Technology

There have been some inquiries regarding the Board’s policy on the use of Direct-Push Technology (Geoprobe) for constructing monitoring wells. After some consideration at the last Board meeting, the Board decided that the policy outlined in the January 2000 issue of Well Developments is still acceptable. A complete copy of the original text appears below:

The Board of Water Well Contractors reviewed the “driven” method of monitoring well installations at its August and December meetings.

Dave Erickson of ATLATL, Inc., proposed that, since rule 36.21.806(2) excludes driven wells in the installation of seals, the geoprobe or driven method in monitoring wells should be allowed. Erickson argued that the sealant can be effectively used similar to driven casing methods used in well construction.

Erickson demonstrated to the board that a ¼” lip of the outer tube bottom (which is detached and left in the hole) provides an effective seal of ¼” inch when bentonite is slurried into the annulus as the barrel is driven. Further, if bentonite chips are also fed into the annulus between the outer barrel and inner (PVC ½” to 1”) sampling tube then another ¼” seal is added when the outer barrel is pulled out, thus achieving a total seal of approximately ½”. The same rule calls for 1½” of seal, except for driven wells.

The board decided that the driven method or geoprobe is acceptable under the following conditions:

- 1. The total monitoring well depth does not exceed 25 feet.
- 2. A bentonite slurry is puddled around the outer barrel and used continuously while the hole is driven.
- 3. Bentonite Chips are fed into the annulus between the PVC sample tube and the outer barrel before the outer barrel is removed.
- 4. The driven method does not cross aquifers.
- 5. The seal is not set below the water table.
- 6. The protruding PVC sample tube is protected at the surface.

This policy does not require a rule change. Persons using the method, however, should be careful to follow the conditional use policy.

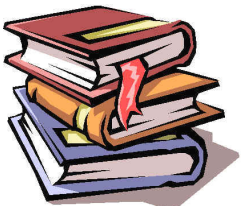
Would you like to know when the next Board meeting is held?

If so, please contact the Board’s program staff at

(406) 444-0860

to be added to the mailing list.

The next regular Board meeting will be in February during the MWWDA convention.



Continuing Education Opportunities

A list of possible CEC’s is also maintained on the Board website under “Driller Forms and Information”

Conventions and Conferences	Date	Location	Phone
Washington Ground Water Association Fall Convention	Oct. 4-6, 2007	Seattle, WA	(360) 757-1551
Oregon Ground Water Association Fall Convention	Oct 13-14, 2007	Warm Springs, OR	(503) 390-7080
California Ground Water Association Convention	Nov. 8-19, 2007	Reno, NV	(800) 687-8733
National Ground Water Association Expo	Dec. 4-7, 2007	Orlando, FL	(800) 551-7379
Courses			
Washington Ground Water Association Electrical Seminar	Oct. 4, 2007	Seattle, WA	(360) 757-1551
OSHA Welding and Compressed Gas Safety Requirements (MOSHTI)	Oct. 11, 2007	Miles City, MT	(406) 444-6401
OSHA 10-Hr General Industry Course (MOSHTI)	Oct. 16-17, 2007	Miles City, MT	(406) 444-6401
Washington Ground Water Association CEU Seminar	Nov. 2, 2007	Spokane, WA	(360) 757-1551
Washington Ground Water Association CEU Seminar	Nov. 3, 2007	Richland, WA	(360) 757-1551
Washington Ground Water Association CEU Seminar	Nov. 9, 2007	Kelso, WA	(360) 757-1551
2M Dealer Meeting	Nov. 29, 2007	Billings, MT	(800) 234-7426
Pumps Workshop (METC)	Dec. 12, 2007	Havre, MT	(406) 265-3762
IDWR GPS/Well Locating Course (2 hours)	Various	IDWR Offices	



Dept. of Natural Resources - Water Rights Bureau

Regional Office	Counties served	Phone
Billings	Big Horn, Carbon, Carter, Custer, Fallon, Powder River, Prairie, Rosebud, Stillwater, Sweet Grass, Treasure, Yellowstone	(406) 247-4415
Bozeman	Gallatin, Madison, Park	(406) 586-3136
Glasgow	Daniels, Dawson, Garfield, McCone, Phillips, Richland, Roosevelt, Sheridan, Valley, Wibaux	(406) 228-2561
Havre	Blaine, Chouteau, Glacier, Hill, Liberty, Pondera, Teton, Toole	(406) 265-5516
Helena	Beaverhead, Broadwater, Deerlodge, Jefferson, Lewis & Clark, Powell, Silverbow	(406) 444-6999
Kalispell	Flathead, Lake, Lincoln, Sanders	(406) 752-2288
Lewistown	Cascade, Fergus, Golden Valley, Judith Basin, Meagher, Musselshell, Petroleum, Wheatland	(406) 538-7459
Missoula	Granite, Mineral, Missoula, Ravalli	(406) 721-4284

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Dept. of Environmental Quality Subdivision Review Program

Billings Office	(406) 247-4447
Helena Office	(406) 444-4400
Kalispell Office	(406) 755-8985
Missoula Office	(406) 258-3720



Board of Water Well Contractors

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